Remarks

At present, Applicants' claims 1, 7, 10-12, 14, 15 and 17 stand rejected under 35 USC § 102(e) based upon the cited patent to Tran et al. (U.S. Patent Number 6,658,018 issued December 2, 2003 and bearing a filing date of June 30, 1999). Claims 2-6, 8, 9 and 13 also stand rejected based upon the above-mentioned patent to Tran et al. in further view of the patent application of Hadzic et al. published April 1, 2004 and bearing a filing date of September 30, 2002. Claims 16 and 18 also stand as being rejected under 35 U.S.C. 103(a) as being unpatentable over Tran, in view of Freimuth et al., (U.S. Patent Number 7,114,096), hereinafter simply Freimuth. Entry of the amendments, reconsideration of the application and allowance of all pending claims are respectfully requested. In light of the comments herein and the claim modifications made above, Applicants respectfully, but most strenuously, traverse all of the rejections for the reasons set forth below.

Preliminary Matters

It would appear that, in the rejection of Applicants' claims 16 and 18 the Examiner's real intent was the rejection of claims 16 and 17. Otherwise, the remarks presented by the Examiner in paragraph 19 of the Final Rejection do not make sense. Claims 16 and 17 deal with storage and processors. That is indeed the import of Examiner's paragraph 19. However, it would appear that the Examiner's arguments in this respect are totally inapplicable to Applicants' claim 18. Accordingly, if this indeed is the case, it would appear that there is in fact no rejection for applicants claim 18. Clarification is requested along with the withdrawal of the finality requirement.

35 USC § 102 Rejection of Claims 1, 7, 10-12, 14, 15 and 17

With respect to the rejection under 35 USC § 102, it is preliminarily noted that rejections under this statute constitute a narrow ground of rejection. The so-called anticipation rejection requires each and every recited claim element to be found within the four corners of a single document. Any exceptions to this rule are not germane to the present discussion.

While with the notion of a backup adapter unit appears to be described in the cited patent to Tran, it is nonetheless seen that their notion of providing redundancy with respect to communication adapters is limited to the adapters that are connected to a single node. This is readily seen in Figure 1 from the cited patent where it is seen that **the "adapter team" to which Tran et al. refer is connected to a single node (network server 100 with but one microprocessor 160)**. The notion of an "adapter team" continues to be expressed in this limited fashion throughout the cited patent. These teachings are evident in the language cited below from the patent to Tran et al.:

> **Tran (Abstract)**: The fault-tolerant adapter team includes a plurality of network adapters, which are **coupled to a computer system (i.e., network server)** and interfaces with a data communications network. [Emphasis added herein.]

It is beyond doubt that the teachings of Tran et al. are that any adapters used for redundancy are connected to the same node. Furthermore, the text upon which the Examiner relies is solely directed to Figure 1 from Tran. In the Final Rejection the Examiner asserts that the "Reference [sic; to?] Tran explicitly discloses the backup adapter 101B-101M of fig. 1 is clearly connected to another node (130, 135, 140, 150, 155,... fig. 1) in the data processing system (server 100, fig. 1)." It is noted that 130 refers to a keyboard controller, that 135 refers to a mouse controller, that 140 refers to a video and/or audio controller, that 150 refers to memory management and that 155 refers to Read Only Memory (ROM). **NONE OF THESE ITEMS IS A NODE!**

In the Final Rejection, the Examiner states that "During examination, the claims must be interpreted as broadly as their terms reasonably allow." In this regard, the Examiner has failed to give Applicants' claims their standard and ordinary meaning. In particular, the Examiner has construed the word "node" to be something which is not only contrary to the meaning ascribed to it by those of ordinary skill in the art but which is also utterly contrary to the meaning given in the very first sentence of Applicants' specification. This meaning is emphasized in the first sentence of Applicants' specification which recites: "The present invention is generally directed to systems and methods for transferring messages from **one autonomous data processing unit (node)** to another such unit across a network." Thus, as is clearly intended, a node is an autonomous processing unit. It is not a controller or ROM as these items are not autonomous and are also not processing units. However, Applicants' specification and claims are consistent in their use of the term "node." It is clear that the litany of items cited above (130, 135, 140, 150, 155) does not include a node.

It would also appear that the Examiner is using the term "node" in an entirely different sense, namely that of a node as found in an electrical circuit. In an electrical circuit, a node is simply the junction of two wires, something that is a far cry indeed from an autonomous processing unit!

The present rejection is based upon the language found in the paragraphs below from the cited patent to Tran et al.:

> **Tran et al. (col. 1, lines 37-65)**: "In an effort to guard against such vulnerability fault tolerant adapter teams 105, as shown in the upper portion of FIG. 1, have been developed which rely on redundancy for their restorative capabilities. These adapter teams **105,** typically comprise a set of M adapters **101, 101B, 101C, . . . 101M** along with corresponding team software, and can be manually configured, by the network administrator, to designate one of the adapters as "primary" 101 and the remaining adapters as "secondary adapters" **101B, 101C, ... 101M.** The primary adapter 101 is configured to support a primary connection 191 to the network and embodies the identity of the adapter team **105** by having its Media Access Control (MAC) address serve as the network adapter 101 address. As such, all communications destined for the server **100** shall be directed towards the primary adapter.
>
> Meanwhile, the secondary adapters **101B, 101C, . . . 101M** serve as back-up connections. The adapter team 105 software contains one or more intermediate drivers 185 that monitor all network connections **191, 191B, 191C . . . 191M** and, in the event of primary adapter 101 failure, the software provides "fail-over" capability by defaulting to a preselected secondary adapter (i.e., 101B) as the alternate primary. [*Note that 101B is connected to the same node, as identified as network server 100.*] The pre-selected secondary adapter is the secondary adapter in the adapter team 105 determined to be most capable. Traffic is subsequently re-routed to the alternate primary adapter, while still utilizing the original primary (or team) 101 address. Thus, the pre-selected secondary adapter 101B automatically assumes ownership of all data going to the server **100,** without the need for human intervention.

In contrast, it is seen that Applicants' claim language, particularly that seen in claim 1, clearly reflects the more advanced notion of having the redundancy of communication adapter units spread across a network. This concept is totally missing from the cited patent which lies at the heart of all of the rejections herein. **In particular, it is seen that in the claimed invention a backup adapter is provided on an entirely different node**! This difference is clearly evident in the original claim language recited below.

> "....designating at least one other communications adapter **connected to another node in said data processing system** as a backup adapter...."
>
> [The present response proposes merely a clarifying change to this language: "...designating at least one other communications adapter connected to another node through a switched network in said data processing system as a backup adapter..."]

It is a well settled principle of patent law that claims that describe a device that evinces different functionality and characteristics than that shown in the cited art cannot be rejected on the basis of anticipation. In particular, in the present invention it is noted that, if network server 100 seen in figure 1 from the patent to Tran et al. fails, then all the redundancy in the world pertaining to their "adapter team" is useless. In particular, it is seen that the system described by Tran et al. is **incapable** of dealing with **node** failure. However, in the present invention, a new master adapter may be provided on a different node. It is noted that Applicants' amendments made herein have been provided for the sole purpose of clarifying the notion that has been emphasized throughout this prosecution and has formed a central aspect in Applicants' specification, namely that a new master adapter can be found on a different node than the original master adapter. In particular, the Examiner's attention is directed to the following language from Applicants' first paragraph:

> "Even more particularly, the present invention is directed to a communications adapter that is provided between **an autonomous data processing unit** and a switched network... In yet another aspect of the present invention, the communication adapters are provided with mechanisms for **time of day synchronization** and with related mechanisms that establish **backup and master/slave relationships** amongst a **plurality of adapters** that permit designated backup adapter units to take over the communications operations of a failed adapter unit." [Emphasis added herein.]

Additional language is also found below in Applicants' specification which supports Applicants' position that the "plurality of adapters" referred to in the quote above comprises all of the adapters in the data processing system (which includes a plurality of nodes, adapters and a network switch, as shown in Applicants' Figure 3), are "in play" when it comes to assigning master/slave and backup relationships:

> **Specification, page 15, lines 12-18:** "Every adapter on a single network is assigned a **logical ID** value from 0 to 4,094 (The exact number is not critical for the practice of the present invention in its most general embodiment). Every adapter in the system is assigned a unique **physical ID** value from 0 to 65,535. Software uses the **logical ID** values to identify two adapters on the same network involved in a data transfer. Hardware uses the **physical ID** value to verify that messages are delivered to the intended destination in spite of hardware failures or miswired cables." [Emphasis in original.]

Rejections based upon 35 U.S.C. § 102 require that all aspects of the recited claim be found as being taught within the four corners of a single document, in this instance the patent to Tran et al. **However, the notion of communication adapter redundancy across a network is a notion which is completely absent from the teachings found in the cited patent. Likewise, the notion that a master adapter on one node may be replaced by a master adapter on another node is also seen to be a concept which is alien to the teachings found in the patent to Tran et al.** Nonetheless, it is seen that this difference is clearly set forth in the claims, especially as modified herein. For this reason, it is seen that the rejection of Applicants' claims under 35 U.S.C. § 102 cannot be sustained. It is therefore very respectfully requested that it be withdrawn.

Rejection of Claims 2-6, 8, 9 and 13 under 35 U.S.C. § 103(a)

In an attempt to support a rejection of Applicants' claim 2 and its related dependent claims, the Examiner has attempted to combine the teachings from the patent application of Hadzic et al. with the teachings found in the patent to Tran et al. While the patent application of Hadzic et al. appears to disclose the notion of a "Time Stamp," the Examiner fails to appreciate that the notion that a time stamp is something entirely different than "Time of Day" (TOD) information. A time stamp does not necessarily possess the accuracy needed for synchronization. For example, the Examiner should fully appreciate that an application level program may assign a timestamp to a message or packet, but that packet may not be transmitted until a significant time later. Therefore, the Examiner is unjustified in equating these two concepts. In stating this, Applicants are not unaware of the fact that Hadzic et al. do we use timestamps for synchronization. However, it is noted that a **timestamp** does not necessarily denote a **time of day**. A timestamp could be a time of day but it is not necessarily so. **Furthermore, it is particularly to be noted that the notion of time of day is nowhere taught, disclosed, or suggested in the cited patent to Hadzic et al.** For the convenience of the Examiner, Applicants' claim 2 is reproduced below:

> **Claim 2**. The method of claim 1 in which said master adapter periodically broadcasts messages containing **time of day information** along with **an indication that said adapter is currently designated as the master adapter**.

It is also noted that, for purposes of synchronization in Hadzic et al., there is no teaching, disclosure, or suggestion that **time of day** information is to be combined with any kind of adapter information for transmission. The only suggestion for doing so arises from Applicants' specification. It would therefore appear that, in this regard, the Examiner is carrying out a hindsight reconstruction of the claimed invention. Additionally, it is noted that, in the patent application of Hadzic et al., there is no indication that the role of master adapter is ever changed. In point of fact, the subject patent application is only directed to communication adapters working in an established and unchanging master-slave relationship.

Assuming, solely for the sake of argument, that the two cited documents are combinable in a meaningful way, it is still nonetheless seen that, with respect claim 2 and the claims that depend therefrom, **there is still no transmission of information through the network that allows a communications adapter on another node to take over the role of a master adapter.** The patent application of Hadzic et al. is at best citable for the notion that a communications adapter is capable of transmitting time stamp information. There is nothing to suggest in the cited patent application that this information constitutes time of day information or that it should be combined with an indication that the transmitting adapter is the current master adapter.

However, even more importantly, it is seen that there is utterly no reason to combine the teachings from the two cited documents. Since the patent to Tran et al. is solely directed to communications adapters that are coupled to a single server, there's utterly no reason to be concerned with synchronization. For that server there is but a single time. There is no need nor purpose for synchronization nor for the transmittal of synchronization information! Those of ordinary skill in the art contemplating the teachings found in the patent to Tran et al. would see no reason whatsoever to be at all concerned with synchronization information. **All of the adapters in the patent to Tran et al. are already part of the same team and share the same time since they are all coupled to a single server or node**. This is supported by the fact that there is no mention whatsoever of the word synchronization in the patent to Tran et al.

Accordingly, it is seen that those of ordinary skill in the art having the two cited documents before them would have no motivation to combine their teachings. Put simply, Tran et al. have no need to synchronize anything. **Furthermore, even if they were to combine the relevant teachings found therein, the teachings would still fall short of the notion of combining the transmission of time of day information with an indication that an adapter is a master adapter as opposed to a backup adapter.**

The Examiner states in his paragraph 20 that "It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Tran and Hadzic because Hadzic's timestamp information would indicate the time when a particular task was performed by the master adapter, as taught by Hadzic (page 9, 0082; page 11, 0091)." Again, it is noted that the discussion in the patent to Hadzic et al. is limited to **timestamp** information. It does not teach, disclose, or suggest the use of "time of day" information which is a much more specific quantity. Accordingly, Applicants reply to this assertion by arguing that the combined teachings would not include any recitations whatsoever relating to "time of day." **However, the phrase "time of day" is specifically included in the language of Applicants' claim 2 and the claims which depend therefrom.** Accordingly, it is seen that the rejection of claim 2 and the claims that depend from it cannot be sustained. Accordingly, it is seen that for this reason, among others, this rejection should be withdrawn, a result which is very respectfully requested.

In this regard, it is also useful to point out that an essential reason for this particular state of affairs is that the claimed invention goes far beyond the conventional notions of having a backup adapter. **Providing a backup adapter from amongst a set of adapters that are coupled to a single node is a relatively easy problem. However, it is an exponentially more difficult problem to solve when one is trying to select a backup or master adapter that is connected to completely different node.** However, it is seen that the claimed invention provides a significant advantage in that the range and availability of backup adapters is greatly improved with obvious performance and reliability benefits.

Rejection of Claims 16 and 18 under 35 U.S.C. § 103(a)

The Examiner has rejected claims 16 and 18 (See the Preliminary Matter comments presented above) for being obvious in view of the two patents discussed above together with the additional patent to Freimuth et al. For the convenience of the Examiner Applicants' claim 16 is reproduced below:

> 16. (Previously presented) A communications adapter having a storage location therein which identifies said adapter as a master adapter, a slave adapter or a backup adapter.

In this regard, it is noted that it is one thing for data processing system software to identify an adapter as a master adapter, a slave adapter or a backup adapter. It is quite another to have such a designation as part of the hardware of the adapter itself.

The Examiner states that "It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Tran and Freimuth because Freimuth's adapters would enhance the capability of Tran's adapter." Applicant responds by asserting that even if the alleged combination were to be made, there is still a lacking of the teaching that a communications adapter includes a storage location which identifies that adapter, in a hardware fashion, as being a master adapter, a slave adapter or a backup adapter. While these adapter concepts are known in the art, they are not employed within the hardware of a communications adapter device as a means for determining its future functionality. Accordingly, it is seen that, even if the asserted combination were to be made, significant pieces would still be missing and significant differences would still exist. For this reason, it is therefore respectfully requested that the rejection of Applicants' claims 16 and 18 (more likely claims 16 and 17, see above) be withdrawn.

It is noted that the present response does not require the payment of any fee. However, it is noted that the present response is being submitted within two months of the Final Rejection. From the above, it is also seen that the rejections of Applicants' claims 1-18 cannot be sustained. It is therefore very respectfully requested that they be withdrawn.

Applicants' attorney wishes to point out to the that should the find it either necessary or desirable to discuss the present response, that he would be willing to discuss any matter which would assist the Examiner in furthering the prosecution of the present application with all due and proper regard for the appropriate scope of the invention. Accordingly, should the wish to discuss this case with Applicants' attorney, the Examiner may contact Applicants' attorney via any of the numbers listed below.

Respectfully submitted,

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